

of the third Part of this Book, if the rays be made oblique to the Glass, the thickness of the Glass requisite to transmit the same bright Light of the same Ring in any obliquity is to this thickness of $\frac{1}{4}$ of an Inch, as the secant of an Angle whose sine is the first of an hundred and six arithmetical means between the sines of incidence and refraction, counted from the sine of incidence when the refraction is made out of any plated Body into any medium incompassing it, that is, in this case, out of Glass into Air. Now if the thickness of the Glass be increased by degrees, so as to bear to its first thickness, (*viz.* that of a quarter of an Inch) the proportions which 34386 (the number of fits of the perpendicular rays in going through the Glass towards the white Spot in the center of the Rings,) hath to 34385, 34384, 34383 and 34382 (the numbers of the fits of the oblique rays in going through the Glass towards the first, second, third and fourth Rings of Colours,) and if the first thickness be divided into 100000000 equal parts, the increased thicknesses will be 100002908, 100005816, 100008725 and 100011633, and the Angles of which these thicknesses are secants will be $26^{\circ} 13'$, $37^{\circ} 5'$, $45^{\circ} 6'$ and $52^{\circ} 26'$, the Radius being 100000000; and the sines of these Angles are 762, 1079, 1321 and 1525, and the proportional sines of refraction 1172, 1659, 2031 and 2345, the Radius being 100000. For since the sines of incidence out of Glass into Air are to the sines of refraction as 11 to 17, and to the above-mentioned secants as 11 to the first of 106 arithmetical means between 11 and 17, that is as 11 to $11\frac{6}{106}$, those secants will be to the sines of refraction as $11\frac{6}{106}$ to 17, and by this Analogy will give these sines. So then if

if the obliquities
the Glafs be fuc-
paſſing out of the
Air be 1172, 16
the 34386th Ring
Glafs which are
34384, 34383, 3
the thickneſs in a
the Glafs of which
Light of the 343
of refraction is 11
and 34382th Ring
2345 reſpectively
the Light of theſe
Speculum to the
white central rou
the Light of the
ters of theſe Ring
made at the con
conſequence thei
the Chart from th
doubled are to th
and 2345, doubl
the diſtance of th
the Speculum be
Observations) the
yellow Light u
2'925, 3'375 Inch
as the above-men
Now theſe Diam
found by compu
found in the thi